

# **The Game Changer in Financial Literacy Education**

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## **The Crisis in Financial Literacy Education**

Over a decade ago, a variety of groups, individuals and states began the push for increased financial literacy education for young people. The need was obvious: the end of defined benefit pension plans, the growth of increasingly complex financial products and alarming student debt burdens had created a perfect storm of financial challenges an entire generation was ill-equipped to weather. As support for the idea grew, the majority of states began to include financial literacy standards in their core curriculum, and several mandated a class in financial literacy in order to graduate. The financial crisis created a greater sense of urgency as the true cost of financial illiteracy became evident. Foundations, educational organizations, and private sector donors responded to the call by creating and updating a variety of curriculum materials to teach financial literacy, many available for free or at a nominal charge to schools and teachers.

After mandates, millions of students taught and billions of dollars of public, private and not-for profit spending later, the results were underwhelming. Anecdotally, it seemed that most financial literacy education was having little effect on behaviors. In an attempt to find out what was working, the National Endowment of Financial Education (NEFE) funded a meta-analysis of the relationship of financial literacy and financial education to financial behaviors in 201 prior studies. One of the major findings was: “Educational interventions and financial literacy as measured to date are only weakly linked to behaviors.” In other words, much of what was passing for financial literacy education wasn’t and isn’t working.

### **Why it often doesn’t work**

Two other studies shed additional light on the problem. A 2010 NEFE sponsored study of 1,200 educators found: 63.8 percent of teachers feel unqualified to utilize their state’s financial literacy standards, only 37 percent of K–12 teachers had taken a college course in personal finance and less than 20 percent of teachers reported feeling very competent to teach any of the six personal finance topics surveyed.

The second study was sponsored by the Jump\$tart coalition. In attempting to identify why students who had a financial literacy course, on average, actually score lower on their financial literacy test they noted: “that the real-life materials can best be taught in an interactive, real-time environment through simulations, games and research projects. That is, of course, usually not possible in today’s school systems.”

For financial literacy as a one-semester intervention or add-on to work, it would need to support teachers who lacked the subject matter expertise. In addition, it would have to be realistic in a way that would be impossible for school systems to provide on their own.

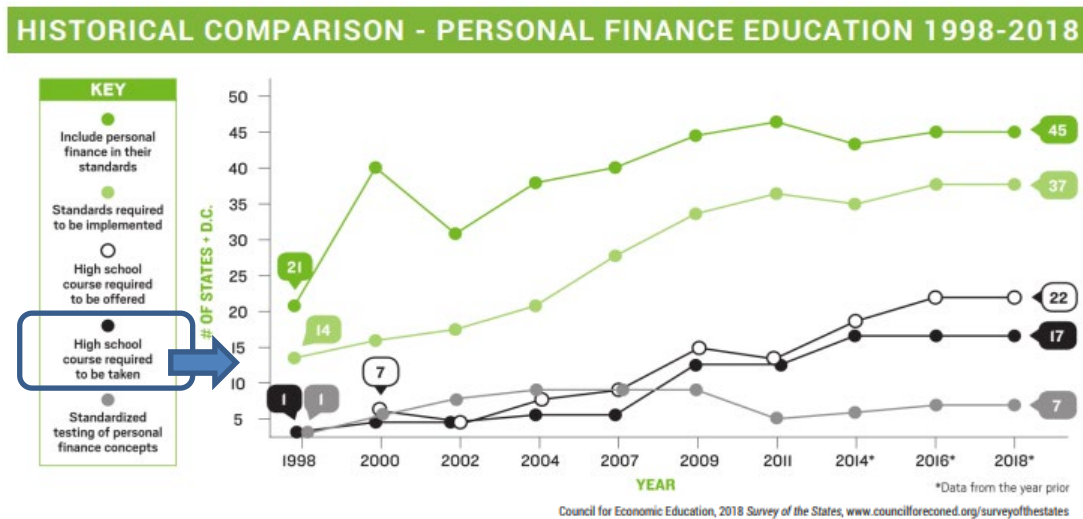
### **When it works, effects are small**

FINRA sponsored a study of the impact of rigorous financial literacy education in the states of Georgia, Idaho and Texas. This study showed that significant efforts in education can have a positive impact on credit scores and delinquency rates. This may be the first real and best evidence that connects financial literacy education to positive behavior changes. Credit scores improved between 1.8% and 5.2%, and delinquency rates declined between 1.8% and 5.8%.

While this is an improvement, it isn’t a compelling solution. A large state-wide mandate involving considerable effort only resulted in a 5-6% advance, and that was the best case; the three-state average was between 3% and 4%. The problem is too large for this to be considered a solution. In the 2014 Standard & Poor’s Global Financial Literacy Study, the United States received a failing grade with only 57% of adults being financially literate. Because personal finance in the real world is increasing in complexity each year, educational efforts must keep pace with ever-increasing demands. Currently, even our best efforts are not creating a compelling case in the debate over financial literacy education.

## The Current State of Financial Education

While the evidence for young people needing financial education is overwhelming, efforts to advance financial education seem to have stalled. At the high school level, the number of states requiring personal finance has remained flat for nearly a decade.



Note the black line in the graph above which shows the states that require a personal finance course be taken in high school. There are many possible explanations. Some point to the research to posit that financial literacy just cannot be taught in high schools. Donors may question whether or not their efforts are really making a difference. Others may argue that time in the school day would be better spent teaching reading or math or something that generates more significant results. Similarly, colleges are increasing their educational offerings, but have yet to require personal finance classes for graduation. This has not changed even though student loan debt is at alarming levels and new graduates are facing more financial difficulties than ever.

## Time for a Game Changer: Budget Challenge®

A game-changing solution to personal finance education may sound impossible. Yet, it happens all the time in other industries, when innovation and technology come together to quickly make what was once impossible, possible. For example, Uber is one of the fastest growing companies and their service is certainly innovative. Nevertheless, Uber would not be successful if it were introduced before internet-connected devices became commonplace.

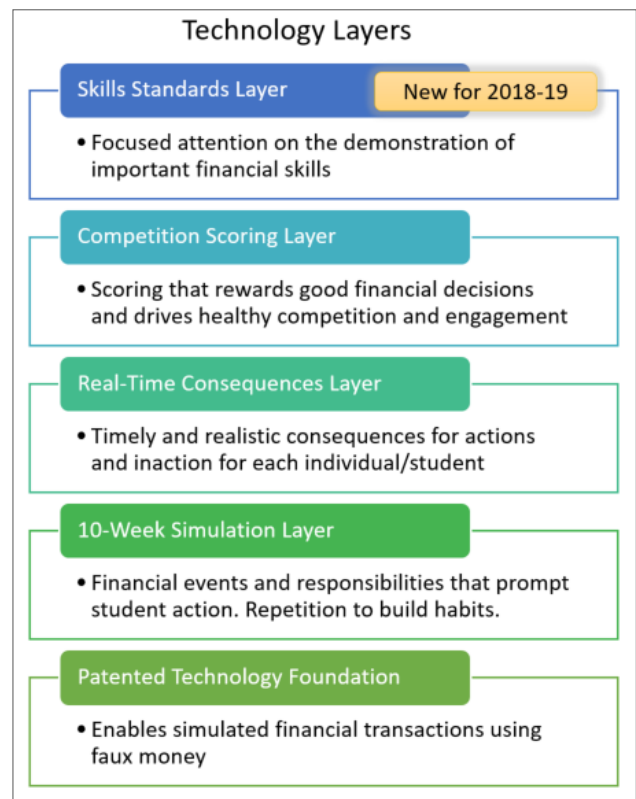
Similarly, the innovation in Budget Challenge® is greatly leveraged by the prevalence of internet-connected devices in schools. It works on mobile phones and even comes with a bill-pay app for paying bills on the go. Budget Challenge is designed for use by teachers and students in schools, but because of the prevalence of mobile devices everywhere, teachers have the ability to make some or all of it outside-of-class work.

## What is the innovation in Budget Challenge®?

The foundation of Budget Challenge is a patented technology that allows for the creation of a simulation where financial transactions like sending bills, processing payments, sending paychecks, and maintaining 401(k) balances are done in real-time for tens of thousands of independent users simultaneously. This technology is the engine behind for the most realistic, learner-centered, financial simulation ever created. Real-time consequences, good and bad, are provided in response to student actions. Constant and meaningful feedback and competitive scoring increase student engagement and learning.

The innovation in Budget Challenge goes well beyond patented technologies. Additional technology layers have been added over the past 12 years as Budget Challenge evolved.

- The Simulation Layer allows students to receive bills, get paid, and pay bills with online bill-pay. A 10-week experience was designed to allow for several monthly billing cycles, which intentionally introduces repetition to assist with building habits. Also in this layer are unexpected events, such as auto accidents that can trigger a claim and billing of the deductible from the auto insurance vendor.
- The Real-Time Consequences Layer provides feedback/consequences for how students respond to events and financial obligations in real-time. This includes feedback logic for when late fees occur, non-sufficient funds charges at the bank, and interest on the credit card.
- The Competitive Scoring Layer rewards good financial decision-making and makes the experience engaging to students by allowing them to compete with each other.
- The Skills Standards Layer is our latest breakthrough. It focuses attention on the execution of the most important financial skills. These are skills even adults chronically have trouble with, such as, establishing an emergency fund, paying-off a credit card, saving for retirement, paying down student loans, and many more. When a student achieves the goal that successfully demonstrates one of these skills, points are awarded and a trophy is earned.



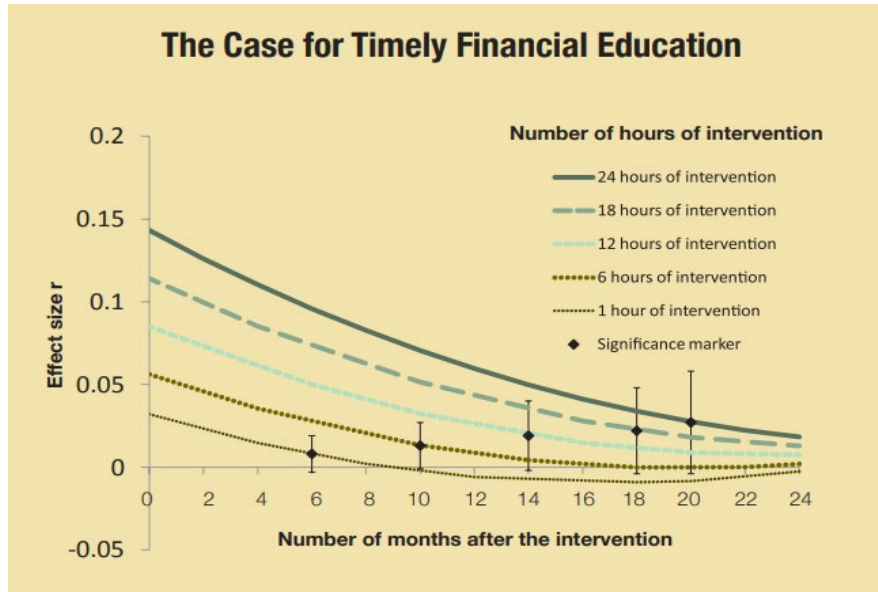
## How will this change the balance of the debate?

The most significant argument made against financial literacy in schools appears in the previously mentioned study funded by NEFE "Examining Financial Education: How Literacy and Interventions Affect Financial Behaviors." This 2014 study was a meta-analysis of the relationship of financial literacy

and financial education to financial behaviors. It is not a single study, rather a study of many other studies. In this meta-analysis, 168 papers covering 201 prior studies were analyzed and there were two core findings regarding financial education:

- 1) Does not last long-term. Within 2 years, the effect-size reduces to zero which means that education efforts will not have a measurable impact on most decisions a student makes later in life.
- 2) Low effectiveness in the short-term. The effect-size of education on behaviors was low in the short-term compared to the typical effect-size in teaching other subjects.

For Budget Challenge to shift the balance of the debate, it had to address these two findings.



National Endowment for Financial Education 2014 - [www.nefe.org](http://www.nefe.org)

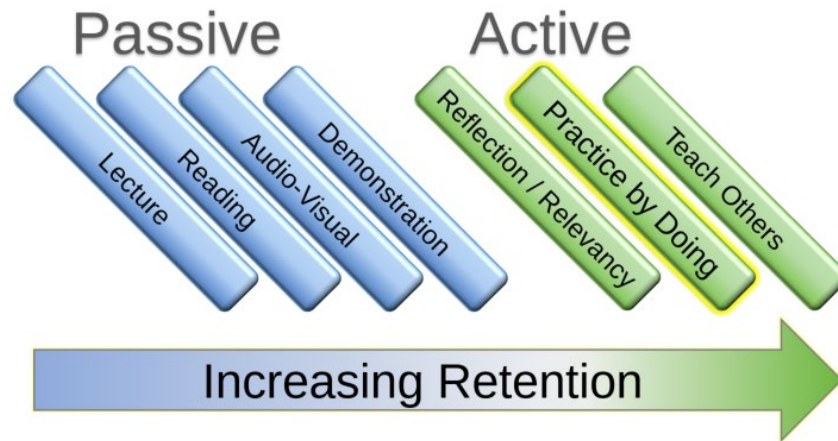
In the graph above, the researchers found that even the most rigorous interventions studied (24 hours), lost effectiveness within two years. The authors also discussed why this happens. They recognized that when finance education is provided in schools, generally too much time passes before that education is used in an actual life decision, such as buying car insurance, which could occur more than two years later.

For education to be effective, it is imperative to reduce the time that passes between education and the active use of that education. Without the active use of education, student learning quickly fades. A true 'Use it or Lose it' situation. Noting that it was impractical to adjust the timing of students' life decisions, the authors recommend delaying the education so that it happens just-in-time for these decisions.

But what if it was possible for students to actively use the financial education while they are still in class? Wouldn't that change everything? This is exactly what Budget Challenge does and why it is a game changer. Budget Challenge bridges the gap between the time when financial education takes place and when students are finally able to apply their financial knowledge. Consequently, they develop their skills, learn from their successes and mistakes, and develop good financial habits. In Budget Challenge, students do all of those things as part of a highly realistic simulation. The time gap is now eliminated and the learning that takes place is learning that lasts.

## How does Budget Challenge® create Learning that Lasts™?

Budget Challenge is focused on allowing students to ‘Learn by Doing,’ which has a much higher rate of retention and produces learning that lasts. The knowledge, skills, and habits necessary for effective financial management are not learned by students passively complete worksheets or reading about personal finance. They will learn them by actively managing their own finances.



Before Budget Challenge technology was developed, Jump\$tart had already outlined characteristics of the ideal educational program, but then concluded it was not possible. Here again is the quote from the executive summary:

*“This leads to a conclusion that full-semester classes in neither discipline (economics or personal finance) are making our young adults more financially literate. The economists in our complex school systems today don’t seem to be finding the time to teach personal finance decision making; conversely, personal finance teachers seem to lack the time to teach the economic and institutional context that students need to make informed choices. **Further, the better financial literacy performance by students who play a stock market game leads to a further conclusion that the real-life materials can best be taught in an interactive, real-time environment through simulations, games and research projects. That is, of course, usually not possible in today’s school systems.**”*

In essence, Jump\$tart was asking for a program similar to the stock market game, where students actively participated, only focused on personal finance. With Budget Challenge, students actually practice financial decision-making in an interactive, competitive, real-time environment.

Budget Challenge is similar to stock-market games in that it is realistic, real-time and engaging. However, there is an important distinction. The scoring in Budget Challenge reinforces a balance of many good financial skills and behaviors, not a single objective such as maximizing portfolio value. A growing criticism of stock market games is that in order for students to win, they likely need to engage in risky, short-term investing behaviors due the limited duration of the contest. In Budget Challenge, students who only demonstrate a short-term strategy will underperform those students that choose a balanced strategy.

## Learning by Doing - How do we know that Active Learning works?

The proof would be to find a successful example of education that contained active learning. Not just any example, there are challenging requirements that an example would need to satisfy in order to serve as a valid comparison to financial literacy education. Therefore, any example of successful active learning education would need to exhibit the following:

- Short in duration (less than or equal to one semester)
- Effective with teens and young adults
- Produces lasting learning
- Implements well in many settings

Is there any example of a successful educational intervention that meets these criteria? Yes, there is. Driver's Education is taught in a variety of ways, but all states require passing a written test and a road test. Consequently, most programs include a classroom component where knowledge is learned and the necessary skills are introduced. They also include the real world component where students have the opportunity to practice those skills, learn from their mistakes, and develop good habits. Once someone completes both parts of this short-term educational intervention, it is extremely rare for any additional training to be needed, even decades later. This education lasts a lifetime and makes it the perfect model for how to make financial education as unforgettable as driving a car.

### Written Test

(Passive)

#### Lecture

- Required Classes

#### Reading

- Course Booklet

#### Audio-Visual

- Road sign chart
- Instructional Movies
- Crash Movies

#### Demonstration

- Observations while a passenger

### Road Test

(Active)

#### Skills to Practice & demonstrate

- Smooth Stop
- Left & Right Turns
- Traffic signals
- Stop signs
- Keeping in lane
- Controls and signaling
- 3-point turn/parallel park
- Passing/Merging
- Speed control
- Following Distance
- Clutch/Gears
- Collision Avoidance

#### Discussion

- Classroom Discussion



*Drivers must SHOW these skills*



Driver's Education uses a combination of active and passive learning for the Written and Road Test. When learners actually demonstrate a skill it is remembered much longer, sometimes forever. Have you ever heard of someone forgetting how to ride a bike or drive a car?

## How does active learning happen in Budget Challenge®?

Similar to Driver's Education requiring the demonstration of actual driving skills in an actual car, Budget Challenge requires the demonstration of important financial literacy skills in real-time throughout the simulation. For example, one of the first skills students demonstrate in the simulation is "Create an emergency fund." To accomplish this, a student will need to log into the website, go to the bank page, select 'Account Transfer,' and electronically transfer funds from the checking account to the savings account. This series of tasks will demonstrate the skill of establishing an emergency fund, but the student must also be careful to not jeopardize their ability to demonstrate other required skills. Continuing with this example, if a student decides to create the emergency fund before receiving a paycheck on Friday, there may not be sufficient funds in the checking account to pay the rent bill on-time, which could negatively impact the demonstration of the "Make on-time payments" skill. Like in real life, students must take into consideration the interconnected nature of financial decisions. A student may recognize that attempting to demonstrate one skill immediately, such as creating an emergency fund may jeopardize the demonstration of another skill such as paying rent by the due date. By using the provided budget and cash-flow spreadsheet, the student can establish a budget and create a cash flow plan to manage the timing of their transactions. To ensure that the future task of creating the emergency fund is not forgotten, the wise student creates a calendar reminder. This is just one example of how active learning takes place inside the 10-week Budget Challenge simulation. **Realistic active learning is the missing ingredient that enables short-term educational interventions to have a lasting impact.**

The effectiveness of traditional personal finance education can be significantly boosted by adding Budget Challenge.

### Written Test

of Knowledge Standards

#### Lecture

- Required Classes

#### Reading

- Course materials

#### Audio-Visual

- Instructional Videos

#### Demonstration

- Observations of others' financial decisions

#### Discussion

- Classroom Discussion
- Student Reflection

### Road Test

of Skills Standards

#### Skills to Practice & Demonstrate

- Create an emergency fund
- Pay-off credit card
- Save for retirement
- Pay down student loan
- Make on-time payments
- Manage credit utilization
- Avoid bank and vendor fees



*Students actually DO these*





This is why Budget Challenge is called the Road Test for Personal Finance®. This once-impossible experience of practicing real financial skills in school is made exponentially more meaningful by allowing every student complete control of their own accounts.

For example: Student A, Student B, and Student C, are in the same class and in the simulation, they all receive a cell phone bill for \$95.85 that is due in 6 days.

- Student A schedules an on-time payment of \$95.50 (mistyping the amount in on-line bill pay).
- Student B schedules an on-time payment for the correct amount.
- Student C makes a mental note to do it later, but entirely forgets.

Over the entire 10-week experience, Budget Challenge provides individualized, real-time feedback to each student.

Continuing with this example, after one week:

- Student A is assessed a bank fee of \$39.50 for overdrawing the checking account. In addition, the cell phone company assessed a \$9.95 late fee as well as a \$30 returned check fee. Student A now has an overdue cell phone balance of  $(\$95.85 + 9.95 + 30.00) = \$135.80$  and is also accruing daily late payment penalties until the bill is paid.
- Student B has the on-time payment process and is showing a cell phone balance of \$0.00 in the account activity and a cleared check in the bank account activity.
- Student C is assessed a \$9.95 late fee and now has a cell phone balance of \$105.80. Daily late payment penalties will continue to be assessed until the balance is paid.

The real world of personal finance can be an eye-opening experience for students. Where other programs sound like a broken record “you should exhibit sound financial behaviors,” only Budget Challenge really shows students why. Students not only learn from their own experiences, but also from the experiences of their classmates.

### **Theory is one thing, but does Budget Challenge® actually work in schools?**

Thousands of teachers in all 50 states have successfully used Budget Challenge. To date, over 700,000 students have used this program. The program is also the recipient of the 2015 Excellence in Financial Literacy Education “Program of the Year” award in the category of Children’s Money Management.

### **Does it work in a variety of settings?**

Yes, Budget Challenge works in high schools and colleges. It has also been used as a stand-alone financial literacy program or a supplement for other subjects that have a financial literacy component such as: Economics, Math, Finance, etc. The amount of class time utilized can also vary. Some teachers use the simulation as a foundation to build their course around, while others assign the entirety of Budget Challenge as homework.

## Does it work with the wide-ranging backgrounds of teachers?

Of all the subjects taught in schools, financial literacy education has possibly the most varied implementation. Each state recommends or requires differently and even the class in which it is taught varies significantly. When personal finance is taught, it can be found in classes such as economics, math, history, business and finance. Budget Challenge is designed with the knowledge that the background and qualifications of those who teach financial literacy varies significantly. Budget Challenge was built over 12 years and each year it has improved based on teacher feedback. Below are some of the key ways Budget Challenge supports teacher success in the classroom.

### Human Help Desk

Not only does Budget Challenge have a real help desk for Teachers and Students, but the helpdesk staff contains former teachers who have used Budget Challenge in the classroom. It can be stressful switching curriculum materials, but Budget Challenge can help.

### Support with Curriculum

Budget Challenge includes full curriculum and assessments. Our curriculum topics are presented in an order that aligns with the timing of simulation events.

### Teacher Training

Budget Challenge actually helps teachers improve their knowledge as well as provides CEU's. In a survey of 1,028 teachers that used Budget Challenge, the following question was asked:

*How much did you find that your knowledge changed due to Budget Challenge?"*

**10.41% answered "Vastly Improved"**

**54.47% answered "Improved Slightly"**

34.82% answered "Did Not Change"

0.29% answered "Slightly Declined"

65% of Teachers improved  
their knowledge using  
Budget Challenge

### Support with Teacher Work Load

The simulation and assessments are self-grading. Teachers have 24/7 access to student performance reporting. The student help desk is available to assist with questions and technical issues. Students and teachers (who are copied on all helpdesk messages) are often surprised that an actual person will investigate students' accounts before responding. Online FAQ's are also available to assist with student questions.

## In Teachers' own words:

*"It was the most realistic experience I can imagine to give to students. For years I tried to simulate creating a budget and paying bills, but it was not nearly as effective and streamlined as this."*

*“Students gain valuable knowledge and experience with the most common personal finance topics that they will use for a lifetime as well as the consequences of what can happen with poor budget planning.”*

*“Your simulation added interest and meaning to my course. One student told me, “I am so glad I took this class because we get to do Budget Challenge! It’s awesome!”*

*“The Budget Challenge is a fantastic way to help my students understand money in the real-world. I enjoyed answering the questions the simulation provoked. Students at various ability levels were able to benefit from this program.”*

**Budget Challenge® has one of the largest sets of student survey data. What do students say?**

The following student survey data is from high school students in Spring Semester 2016 and Spring Semester 2017. We asked over 100,000 students about what skills they learned from Budget Challenge.

**“For the following questions: Think back to the start of the simulation. Would you agree that now as a result of taking Budget Challenge you are:”**

	<u>Answer</u>	<u>Count</u>	
<b>more able to avoid fees from vendors and banks</b>	<b>Yes</b>	<b>83,500</b>	<b>82.3%</b>
	No	18,001	17.7%
<b>more knowledgeable about how to write check</b>	<b>Yes</b>	<b>89,460</b>	<b>88.1%</b>
	No	12,041	11.9%
<b>more likely to check account balances before writing checks</b>	<b>Yes</b>	<b>91,083</b>	<b>89.7%</b>
	No	10,418	10.3%
<b>more skilled at creating budgets</b>	<b>Yes</b>	<b>84,516</b>	<b>83.3%</b>
	No	16,985	16.7%
<b>more confident about managing money</b>	<b>Yes</b>	<b>85,863</b>	<b>84.6%</b>
	No	15,638	15.4%

**Simulated money, but real emotions and real impact**

One of the interesting observations from years of running Budget Challenge is how emotional it can be for students. The simulation can become so real that students experience many of the emotions associated with managing a tight budget in real life. Below are some quotes from students regarding their experience with the simulation.

*“After the Budget Challenge simulation, I’ve become so much more aware of the consequences of managing your money wrong. Before the simulation, I had some knowledge in money*

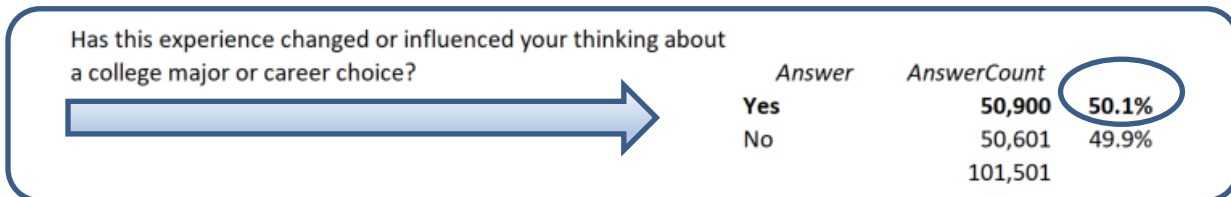
*management, but I never actually had a true understanding. Even though it was just a simulation, I was still stressed out at times about my financial situation. There were times I wasn't always able to pay my bills, in full, at one time. I struggled with making payments on time because I sometimes had insufficient funds. I understand, now, that late fees and interest play a big part in the final sum you pay."*

*"Before, I used to roll my eyes at my smart, money-conscious mother, who kept stressing the importance of this class, as she did not have this when she was my age. However, while participating in the challenge, I uncovered the many layers of banking and personal finance, and the long-term consequences of poor money management. Overall, I now share the same interest in money responsibility as her."*

*"Before the budget challenge I was afraid of money and budgets because I did not know how to save and manage them. Paying bills had stressed me out and I wanted nothing to do with it. After the challenge I grew to kind of liking budgeting and keeping any eye on my money. Making sure that I was on top of my bills was hard in the beginning, but now it does not bother me so much because I am in control of my bills and money."*

### Impacting more than education

To help illustrate the true life-changing impact this 10-week experience has, we asked students a question that many programs would be afraid to ask.

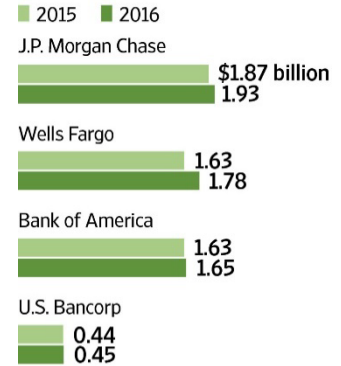


Yes, that is correct, just over half of students said Budget Challenge impacted one of the most important future life decisions a young person will make. How many classes have this kind of impact? For many students, Budget Challenge is more than game-changing. It is behavior-changing. It is life-changing.

**After graduation, learning by doing still works.  
It is performed by adults and it is expensive.**

According to Moeb's, in 2016, banks recorded \$33 billion in Overdraft fees. In 2012, Moeb's estimated the average number of overdrafts per checking account to be 7.1 per year. Think about that. That is over seven common financial mistakes per year. Each of these mistakes can cost from \$15-\$45. This is why the #1 revenue source for banks is fees. When skills are not taught in schools, adults learn through trial and error using real money with real financial decisions.

Overdraft revenue at four large retail banks



Source: S&P Global Market Intelligence

**How expensive is real world education?**

Nerdwallet performed their own study and looked at the average cost of overdraft and other fees over time. They found that the average checking account fees (Overdraft, NSF, ATM, maintenance fees, and account use fees) exceeded \$1,000 over a decade. That is over \$100 a year for a typical adult. For younger people the cost is even greater.

**The business case for Budget Challenge®**

The business case for Budget Challenge is easy to understand when the costs of not having effective financial literacy education are known. There are two ways to think about the business case for this educational investment.

#1 Short pay-back time: Inside of Budget Challenge, students often see for the first time how payroll, billing, and banking actually work together in real-time. Students make dozens of their “rookie mistakes” in the simulation that they would likely have made in the real world. Budget Challenge provides the consequences and learning without the cost in fees or damage to credit score.

#2 Lasting knowledge and habits: Budget Challenge is the only program to provide tools and hands-on instruction for how to use them in real-world situations. Inside of the simulation, students use these tools to learn, practice and strengthen good habits. These habits will make a lasting impact on students’ financial futures. It will result in their maintaining higher credit scores that will save them money on interest expenses, insurance and even help them obtain a job or a mortgage. Learning the value of saving for retirement and maximizing employer contributions can make the difference between a financially secure retirement and one filled with financial uncertainty. These tools and habits can also reduce mistakes and fees every year for ongoing savings and reduced stress.

This entire 10-week experience costs less than just one common overdraft mistake at a bank. Banks charge about \$34 on average for each overdraft. The cost of Budget Challenge is \$25 per student which is a great investment if it only prevents just one overdraft.

When over 25,000 students were asked the following question:

**“If a typical mistake in the real world cost between \$30 and \$40, how much in future fees would you estimate you saved by taking Budget Challenge?”**

\$0 (zero mistakes avoided) = **6.9%** of students

\$30-\$40 (about 1 mistake avoided) = **20.7%** of students

\$60-\$80 (about 2 mistakes avoided) = **31.2%** of students

\$90-\$120 (about 3 mistakes avoided) = **18.4%** of students

Over \$120 (4 or more mistakes avoided) = **22.8%** of students

Taking the weighted average of these answers tells us that students expect to avoid over \$80 in future mistakes because of taking Budget Challenge. While education is hard to place a value on, we are confident that Budget Challenge more than pays for itself. This lasting educational experience could easily be the highest ROI course a student will ever take.

### **Is it difficult to start using Budget Challenge®?**

Budget Challenge can easily be added to an existing curriculum, like adding a student lab component to Chemistry class. Budget Challenge includes all materials for students, support for teachers, instructional videos and comprehensive self-scoring assessments. There are no costly add-ons or hidden fees. Teachers can pick and choose which resources they wish to use and employ some, all or none of the assessment in their course grading. Throughout the school year, simulations start every Thursday night and last for 10 weeks.

### **Where do I go to get more information or sign up?**

More information on how to bring game-changing financial literacy education to your class, please visit our website: [www.budgetchallenge.com](http://www.budgetchallenge.com). Videos of about Budget Challenge including “How to play” can be found on our YouTube channel, <https://www.youtube.com/user/BudgetChallenge>

### **Final Words**

We collect and analyze a lot of feedback so that we can continuously improve the program. Over the years, one of the things we consistently hear from teachers and parents that learn about Budget Challenge is this:

*“I wish I had that.”*



**BUDGET CHALLENGE®**  
ROAD TEST FOR PERSONAL FINANCE®

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